UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte Guillermo A. Alvarez, Chenyang Lu, and John Wilkes

Appeal No. 2006-1109
Application No. 09/843,882

ON BRIEF

Before HAIRSTON, RUGGIERO, and BARRY, *Administrative Patent Judges.*
BARRY, *Administrative Patent Judge.*

A patent examiner rejected claims 1-23. The appellants appeal therefrom under 35 U.S.C. § 134(a). We reverse.

I. BACKGROUND

The appellants explain that the executor of their on-line data migration engine migrates user data in a storage system while maintaining guarantees of application performance. (Spec. at 6.) More specifically, the executor includes a module for monitoring performance parameters of a computer system executing foreground applications and for forwarding the performance parameters to a controller of the migration executor. The controller compares the forwarded performance parameters with performance goals for the application and issues commands to an actuator.

Responsive to the commands, the actuator increases or decreases the rate of the data migration. (*Id.* at 7.)

A further understanding of the invention can be achieved by reading the following claim.

1. A method for migrating data, said method comprising:

moving a set of data in a data storage system of a computer system;

monitoring a performance of at least one executing application, while said moving is in progress;

calculating a change in a rate of said moving in response to said monitored performance of the at least one executing application; and

modifying said rate of said moving in accordance with said calculated change.

Claims 1-23 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,636,951 ("Tachikawa") and U.S. Patent No. 6,230,239 ("Sakaki").

II. OPINION

At the outset, we remind the examiner that an "examiner's answer is required to include," under the heading "Grounds of Rejection," an explanation of the ground of rejection. M.P.E.P. § 1207.02 (8th ed., rev. 2, Aug. 2005). Here, the examiner omits the explanation from the Grounds of Rejection section of his answer. (Examiner's Answer at 3.) Instead, he reproduces the explanation in the "Related Proceeding(s)

Appendix" of the answer. The examiner should ensure that the explanation of the grounds of rejection are included in the "Grounds of Rejection" section of his answer.

That said, "[r]ather than reiterate the positions of the examiner or the appellants *in toto*, we focus on a point of contention therebetween." *Ex parte Sienel*, No. 2005-2429, 2006 WL 1665423, at *1 (Bd.Pat.App & Int. 2006). Admitting that "Tachikawa does not expressly disclose: (c) calculating a change in a rate of said moving in response to said monitored performance of the at least one executing application; and (d) modifying said rate of said moving in accordance with said calculated change," (Examiner's Answer at 10), the examiner asserts, "Sakaki explains that the calculated rate of change of the queuing time is considered 'path resource information' (see, for example, column 8, lines 15-23), and that the calculated rate of change of the contentions is considered 'old VOL resource information' (see, for example, column 8, lines 24-31)." (*Id.* at 5.) He adds, "[T]he queuing time and the contentions relate to the performance of at least one application. Sakaki expressly discloses, 'Based on the order of the priority of sequence of data migration and the various resource information, a judgment is performed to determine whether migration speed should be changed (Step 47)' (column 8, lines 32-35, emphasis added)." (*Id.*)

The appellants make the following argument.

> "The above-cited passages discuss changes to the rates of the average queuing time and the existence of contentions, respectively, and thus do not discuss calculating a change in the rate at which a set of data is moved in response to a monitored performance of at least one executing application. These passages also fail to disclose that the rate at which the set of data is moved is modified in accordance with the calculated change." (Appeal Br. at 13.)

In addressing the point of contention, the Board conducts a two-step analysis. First, we construe the independent claims at issue to determine their scope. Second, we determine whether the construed claims would have been obvious.

A. CLAIM CONSTRUCTION

"Analysis begins with a key legal question — *what* is the invention *claimed*?" *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). In answering the question "[t]he Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." *In re Lowry*, 32 F.3d 1579, 1582, 32 USPQ2d 1031, 1034 (Fed. Cir. 1994) (citing *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 403-04 (Fed. Cir. 1983)).

Here, claim 1 recites in pertinent part the following limitations: "moving a set of data in a data storage system of a computer system; monitoring a performance of at least one executing application, while said moving is in progress; calculating a change in a rate of said moving in response to said monitored performance of the at least one executing application. . . ." Claims 11, 16, and 23 include similar limitations. Considering all these claim limitations, the independent claims require calculating a change in the rate at which data are migrated in a computer's storage system.

B. OBVIOUSNESS DETERMINATION

"Having determined what subject matter is being claimed, the next inquiry is whether the subject matter would have been obvious." *Ex Parte Massingill*, No. 2003-0506, 2004 WL 1646421, at *3 (Bd.Pat.App & Int. 2004). "In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993) (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992)). "'A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.'" *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)).

Here, Sakaki "automatically adjust[s] data migration speed during data migration depending on the state of the load to [a] new volume so as to give priority to accesses to the new volume by, (col. 2, ll. 51-53), [a central processing unit]." More specifically, as observed by the examiner, *supra*, the reference explains that "[b]ased on the order of the priority of sequence of data migration and the various resource information, a judgement is performed to determine whether migration speed should be changed (Step 47)." (Col. 8, ll. 32-35.) Although Sakaki changes the speed at which data are migrated, the examiner has not shown where the reference calculates a change in the rate at which the data are migrated. Absent a teaching or suggestion of the feature, we are unpersuaded of a *prima facie* case of obviousness. Therefore, we reverse the obviousness rejection of claims 1, 11, 16, and 23, and of claims 2-10, 12-15, and 17-22, which depend therefrom.

III. CONCLUSION

In summary, the rejection of claims 1-23 under § 103(a) is reversed.

REVERSED

KENNETH W. HAIRSTON
Administrative Patent Judge

JOSEPH F. RUGGIERO
Administrative Patent Judge

LANCE LEONARD BARRY
Administrative Patent Judge

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